

At the same time, because UNE price levels are critical to the development of local competition, the Commission patently need not and should not await the filing of a § 271 application before it begins to take an active role in assuring that prices in fact comply with TELRIC. The Commission has abundant other mechanisms at its disposal. It can and should use its rulemaking authority to specify the requirements of TELRIC in much greater detail and prescribe how TELRIC should and should not apply in particular circumstances. There are pending petitions for reconsideration of its local competition rules that provide some such opportunities, and if the Commission exercises this jurisdiction, other issues can be speedily resolved through petitions for further rulemaking or declaratory rulings. All such decisions will bind states in the conduct of future arbitrations and bind federal district courts when they conduct review of state decisions under § 252(e)(6) of the Act. As experience over the last four years has confirmed, unless the Commission uses its rulemaking and declaratory ruling authority to issue binding decisions providing further guidance on the application of TELRIC, the federal courts simply cannot perform their intended function of “bring[ing] to heel” states who seek to advance policies at odds with those of the Act. *See AT&T v. Iowa Utilities Board*, 525 U.S. at 387 n.6.

Further, while the Commission’s rulemaking and other authority should be fully adequate to secure these objectives, these are not the only mechanisms at the Commission’s disposal. Because § 208 gives the Commission authority to hear complaints involving any LEC violations of the provisions of the Act, it could, if necessary, also entertain § 208 complaints against LECs who charge excessive UNE prices. *See Local Competition*, ¶¶ 127-28; *AT&T v. Iowa Utilities Bd.*, 525 U.S. at 386 (rejecting pre-enforcement challenge to such uses of § 208). In extreme cases, the Commission could also enforce TELRIC by exercising its authority under the Act’s

other enforcement provisions. *See Local Competition*, ¶ 129 (discussing authority under 47 U.S.C. §§ 312, 403, 501-03).²¹

These exercises of rulemaking and other authority would pose no substantial burden on the Commission, for the Commission has already conducted exhaustive proceedings that specify the requirements of TELRIC and that resolve virtually all the issues that currently require resolution. In particular, to eliminate arbitrage opportunities, the Commission adopted the same TELRIC standard to determine the size of federal universal service subsidies under § 254 of the Act (*Universal Service*, 12 FCC Rcd. at 8916), and the Commission conducted two solid years of proceedings to refine the TELRIC cost model and prescribe the inputs that are and that are not permissible. Ninth Report and Order, *Universal Service*, CC Docket No. 96-45 (Oct. 21, 1999). Indeed, because the Commission has now determined input values for every wire center of every non-rural LEC (using averaged nationwide values), one of many very simple steps that the Commission could take is to make it explicit that states should use these same input values unless there is specific evidence that the values for the input are higher or lower in that state, or that there is some difference in the character of an element when employed as a UNE rather than for USF purposes – as there typically is not.

Moreover, the Commission has more than its own prior universal service orders on which to draw. Virtually every state in the nation has determined prices for each of the UNEs. The decisions of the states that have rigorously applied TELRIC (*e.g.*, Michigan) provide additional benchmarks. The fundamental reality is that by enacting national pricing standards, Congress plainly intended them to be implemented uniformly, such that the same UNEs would have the

²¹ In this regard, the Commission has conditioned its approval of LEC mergers on requirements that LECs propose prices that satisfy TELRIC. Regrettably, however, the Commission elected not to enforce these conditions. *See AT&T v. Bell Atlantic Corp.*, File No. E-98-05 (Aug. 18, 2000).

same or virtually the same rates in all locales that have the same or substantially similar terrain, population density, regulatory requirements for use of rights of ways, and other related conditions germane to the forward looking costs of providing the service. To allow any individual state to set rates at excessive levels is to allow it to exempt itself from fundamental national policies.

Most significantly, if the FCC exercises its rulemaking and other powers in these ways, the rate determinations that will be made in § 271 proceedings will entail no or little incremental burdens on the Commission and will not strain its ability to decide § 271 applications within the statutory 90-day period. The reality is that there will be clear rules as to what the requirements of TELRIC are and as to what rate levels are and are not within the zone of reasonableness in particular density zones. In that event, it will be an easy matter for BOCs to assure that they are charging prices that comply with TELRIC – as any BOC can do with the stroke of a pen and irrespective of the prior rate determinations made by its state commission. *See* § 252(a)(1). And if the BOC persists in charging excessive UNE prices, it will be an equally easy matter for the Commission to ascertain this fact, to reject the application on this ground, and to specify the conditions under which the application will be granted. Indeed, Congress imposed the 90-day limit on decision of § 271 applications in recognition of the fact that the Commission would be specifying the requirements of the competitive checklist in great detail through the exercise of its other regulatory powers, and that determination of Section 271 applications in 90 days would therefore be manageable.

Finally, these points have special force here, because what is at stake in this proceeding is nothing less than the question of whether a vitally important Act of Congress will be implemented throughout the nation. The existence of effective competition through UNEs is

absolutely central to the dual congressional objectives of (1) fostering maximum competition in the provision of local services and (2) protecting long distance competition by prohibiting BOCs from providing long distance services until their local markets are irreversibly open and BOCs have therefore lost the ability to leverage local monopolies into competitive long distance markets.

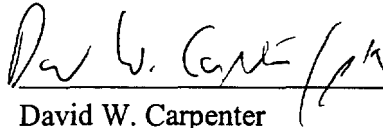
CLECs' practical ability to use UNEs to provide broad-based, competitive alternatives is crucially dependent on the existence of prices that are no higher than the economic costs that the LECs incur when they offer their own services over these same facilities. In this regard, it is critical to emphasize that CLECs face enormous other hurdles when they offer UNE-based services. They incur tremendous transaction costs in attempting to obtain the facilities from monopolists who have no incentives to share them. They must invest in costly systems and infrastructures in order to be in a position to offer UNE-based exchange and exchange access services in any state. And they incur massive marketing and related costs in any attempt to win customers away from entrenched monopolists. This is a climate in which even seemingly small errors can inflate UNE rates so as to make competition wholly infeasible.

UNEs can achieve the Act's objectives. But that will not happen unless the Commission does the job that Congress gave it and begins strictly to enforce the Act's pricing requirements in § 271 and other proceedings. AT&T respectfully urges the Commission to do so here and to announce that it will hereafter do precisely what it promised in the *Local Competition* and *Ameritech Michigan Orders*: use the full range of its rulemaking and other powers to define and enforce TELRIC, mandate that the BOC prove that its rates satisfy the Act's pricing requirements in § 271 applications, and deny the BOC's application if the Commission cannot determine that the rates are in fact procompetitive and comply with TELRIC principles.

CONCLUSION

For the reasons stated, AT&T respectfully submits that Verizon's Massachusetts application should be denied.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "David W. Carpenter", is written over a horizontal line.

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November 2, 2000



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Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of)
)
Application by Verizon New England Inc., Bell)
Atlantic Communications, Inc. (d/b/a Verizon Long)
Distance), NYNEX Long Distance Company (d/b/a)
Verizon Enterprise Solutions), and Verizon Global)
Networks Inc., for Authorization to Provide In-)
Region, InterLATA Services in Massachusetts)

CC Docket No. 00-176

**DECLARATION OF
BRADFORD CORNELL AND JOHN I. HIRSHLEIFER
ON BEHALF OF AT&T CORP.**

November 2, 2000

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**DECLARATION OF
BRADFORD CORNELL AND JOHN I. HIRSHLEIFER
ON BEHALF OF AT&T CORP.**

I. INTRODUCTION AND SUMMARY

1. Our names are Bradford Cornell and John I. Hirshleifer. We are, respectively, a Senior Consultant and a Principal at Charles River Associates, Inc. ("CRA"), an international financial and economic consulting firm. Our business address at CRA is 10877 Wilshire Blvd., Los Angeles, California 90024.

2. (Bradford Cornell) I am a Professor of Finance and Director of the Bank of America Research Center at the Anderson Graduate School of Management at the University of California, Los Angeles (UCLA). I earned my bachelor's degree from Stanford in physics, philosophy, and psychology in 1970. I earned a master's degree in Statistics from Stanford University in 1974 and earned my doctorate in Financial Economics from Stanford in 1975.

3. Since 1975, I have taught a variety of courses at the University of Arizona, University of Southern California, California Institute of Technology, and UCLA, including courses involving corporate valuation, the law and finance of corporate acquisitions and restructurings, corporate financial theory, and securities valuation and investments. I have also taught at the UCLA Law School. At UCLA, I have twice served as Vice-Chairman of the Anderson School and have twice served as chairman of the finance department.

4. Aside from my teaching responsibilities, I have been active in research. I have written more than 70 articles and two books on finance and securities, including *Corporate Valuation: Tools*

for *Effective Appraisal and Decision-Making*, published by McGraw-Hill and *The Equity Risk Premium and the Long-run Future of the Stock Market*, published by John Wiley. To complement my academic writing, I have also authored articles for *The Wall Street Journal* and the *Los Angeles Times*.

5. My research has been widely recognized. In 1988, I was cited by the Financial Management Association as one of the ten most prolific authors in the field of finance. I have also received prizes and grants for my research from the Chicago Board of Trade, the Chicago Mercantile Exchange and the Institute for Quantitative Research in Finance. My article, *Corporate Stakeholders and Corporate Finance*, for which I and my co-author, Alan C. Shapiro, received the 1987 Distinguished Applied Research Award from the Financial Management Association, is the most frequently cited article published in *Financial Management* since 1985. In 1999, I was awarded the I/B/E/S prize for empirical work in finance and accounting (with Wayne Landsman and Jennifer Conrad.)

6. I have also been active in my profession. I am a past Vice-President of the Western Finance Association. I am also a past director of both the American Finance Association and the Western Finance Association. I have served as an associate editor of numerous professional journals including: *The Journal of Finance*, *the Journal of Futures Markets*, *The Journal of Financial Research* and *The Journal of International Business Studies*. I have served as a reviewer for nearly a dozen other professional journals.

7. During the past twenty years I have been active as a consultant in complex litigation and regulatory matters. For example, I was the valuation expert for the bondholders following the bankruptcy of the Washington Public Power Systems ("WPPSS"). In 1986, I was retained to

examine the impact of questionable bids by Salomon Brothers in Treasury security auctions on the government securities market. In 1994, I was retained by attorneys for Orange County to evaluate the losses caused by the county's investment activities. As a result of this work, Los Angeles Mayor Riordan asked me to form a Blue Ribbon Commission to examine the investment portfolios of the City of Los Angeles and the Police and Fire pension funds. More recently, the Federal Deposit Insurance Corporation has retained me to help them value the supervisory goodwill that was lost when the government defaulted on contracts with over 300 financial institutions following the passage of FIRREA.

8. I have testified in numerous TELRIC UNE and USF cost proceedings on behalf of MCI and/or AT&T, and have filed testimony with the FCC in its current proceeding regarding the represcription of rates for the provision of interstate access services.¹ My resume is attached as Attachment 1.

9. (John I. Hirshleifer) I graduated from the University of California at Los Angeles with a B.A. degree in 1976, and received an M.B.A. in finance from UCLA's Anderson Graduate School of Management in 1980. I worked at Price Waterhouse from 1980 to 1984 and I am a certified public accountant in the State of California. From 1985 through 1990 I was the due diligence officer of Transamerica Financial Resources, Inc. (TFR), the broker-dealer subsidiary of Transamerica Corporation. While at Transamerica I held the registered representative, securities principal and financial and operations principal licenses, and ultimately became TFR's treasurer and chief financial officer. From 1991 through 1999 I was Vice President and Director of Research of FinEcon, a firm

¹ *In the Matter of Prescribing the Authorized Unitary Rate of Return for Interstate Services of Local Exchange Carriers*, CC Docket No. 98-166.

which provided financial economic consulting services to corporations, law firms and government agencies. At FinEcon I was responsible for numerous engagements involving securities, valuation and cost of capital issues. In 1999, FinEcon merged with CRA. As a Principal with CRA, my duties are substantially similar to those I held at FinEcon. In the past several years, I have provided cost of capital testimony in numerous state proceedings regarding the provision of unbundled network elements ("UNEs") to competing local exchange carriers and the provision of universal service, and have testified in the FCC's current proceeding regarding the represetation of rates for the provision of interstate access services.² I also co-authored an article entitled "Estimating the Cost of Equity", which was published in the Autumn 1997 issue of *Contemporary Finance Digest*. My resume is attached as Attachment 2.

10. The purpose of this declaration is to evaluate whether the 12.16 percent weighted average cost of capital adopted by the Massachusetts Department of Telecommunications and Utilities ("MDTE" or "DTE")³ in its decisions of December 1996 and February 1997 setting UNE prices for NYNEX (now Verizon)⁴ in Massachusetts comply with the forward-looking cost principles adopted by the Commission under the Telecommunications Act of 1996. We believe that the weighted average cost of capital adopted by the MDTE—12.16 percent—was excessive, unreasonable, and anticompetitive in February 1997, and is even more so today. Indeed, if the objective of a state UNE cost proceeding is to facilitate competitive access into the local exchange market now served by the LECs — as the FCC's *Local Competition Order* of August 8, 1996

² *Id.*

³ Before 1998, the MDTE was known as the Massachusetts Department of Public Utilities. In this Declaration, we use the titles interchangeably.

⁴ In this declaration, we use the corporate names NYNEX, Bell Atlantic and Verizon interchangeably unless the context requires otherwise.

("Local Competition Order")⁵ makes clear—then the cost of capital set by the MDTE represents an obstacle to such entry.

II. THE 12.16 PERCENT COST OF CAPITAL ADOPTED BY THE MASSACHUSETTS DTE IN FEBRUARY 1997 FAR EXCEEDS THE FORWARD-LOOKING COST OF CAPITAL DETERMINED BY MOST OTHER ANALYSTS THEN AND NOW.

A. The Cost of Capital Studies Sponsored By AT&T Finance Experts In Massachusetts And Other States Since 1996 Demonstrate That The Forward Looking Cost Of Capital Of The Business Of Supplying UNEs Is In The Range Of 10 Percent Or Less.

11. The 12.16 weighted average cost of capital adopted by the Massachusetts DTE in February 1997 can only be described as an outlier. It is far above the cost of capital estimates that we and other expert witnesses for AT&T have developed in UNE litigation involving Verizon since 1996, based on generally accepted estimation methods using 1996 or 1997 data (approximately 10 percent), and even farther above the value that analysts are deriving today with the same methods from current data (approximately 9.5 percent).

12. In the 1996-97 DTE litigation before the MDTE, AT&T submitted a cost of capital study by Glenn Hubbard, Carson Professor of Economics and Finance and Senior Vice Dean of the Graduate School of Business at Columbia University. Dr. Hubbard recommended a weighted average cost of capital of 9.8 percent for NYNEX, based on a forward-looking equity cost of 11.5 percent, a current debt cost of 7.7 percent, and a capital structure consisting of 45 percent debt and 55 percent equity.⁶

⁵ First Report and Order, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98 (released August 8, 1996).

⁶ Direct Testimony of Robert Glenn Hubbard on behalf of AT&T Communications of New England, Inc., in D.P.U. 96-80/81, *In the Matter of the Interconnection Agreement Negotiations Between AT&T Communications of New England Inc. and New England Telephone and Telegraph Co. Pursuant to 47 U.S.C. § 252* (filed Oct. 11, 1996) ("Hubbard Direct").

13. We believe that both the methods and results of Dr. Hubbard's study were reasonable, and consistent with generally accepted methods of estimating capital costs used by competent finance professionals. We ourselves obtained virtually identical results when we estimated for AT&T the weighted average cost of capital of local Bell Atlantic operating companies in Delaware, Maryland, New Jersey, Pennsylvania, Virginia, West Virginia, and the District of Columbia during the 1996-97 period. Our results ranged from a low of 9.74 percent to a high of 9.83 percent, depending on the average yield on outstanding debt issued by each local operating company.

14. One of us (John Hirshleifer) has also performed similar studies within the past few months for AT&T in the current UNE proceedings involving Verizon before the Public Service Commission of New York and the New Jersey Board of Public Utilities. In these updated studies, I have estimated a cost of capital in the range of 9.04 percent and 9.91 percent. This estimated range is based on costs of debt and equity of 7.86 percent and 10.42 percent, respectively, and a debt/equity capital structure of 54/46 percent, on the low end, and 20/80, on the high end. The midpoint of the cost of capital range is 9.47 percent, corresponding to an implied debt/equity capital structure of 37/63 percent.⁷

B. The Cost of Capital Determinations Of Other State Commissions In The NYNEX And Bell Atlantic Service Areas During 1996-97.

15. The 12.16 percent cost of capital adopted by the MDTE in 1997 is also an outlier among the cost of capital findings ultimately issued by other state commissions in UNE litigation

⁷ See Rebuttal Testimony Of John Hirshleifer On Behalf Of AT&T Communications Of NJ, L.P, in New Jersey Board of Public Utilities Docket No. TO00060356, *In the Matter of the Review of Unbundled Network Elements Rates Terms and Conditions of BA-NJ* (filed Oct. 12, 2000); Rebuttal Testimony Of John I. Hirshleifer On Behalf Of AT&T Communications Of New York, Inc. and Worldcom Inc., before the New York Public Service Commission, Case 98-C-1357, *Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements* (filed October 19, 2000).

during the 1996-97 period. The vast majority of state commissions in the Verizon service area found that the forward looking cost of capital of the local Verizon operating company was between 10 and 11 percent.⁸

JURISDICTION	COST OF CAPITAL ADOPTED
<i>Massachusetts</i>	<i>12.16%</i>
Pennsylvania	11.9%
West Virginia	11.25%
Maine	10.61%
New Hampshire	10.61%
New Jersey	10.4%
Delaware	10.28 %
New York	10.2%
Virginia	10.12%
Maryland	10.1%
Vermont	10.0%
District of Columbia	Pending

16. We understand that many of these states are comparable to Massachusetts in population, population density, industrialization, and the presence of existing or potential facilities-based competitors to Verizon. Yet no other public utility commission in any of these states found that a Bell Atlantic or NYNEX operating company had a cost of capital as high as 12 percent. Only two other jurisdictions—Pennsylvania and West Virginia—adopted a cost of capital even as high as 11 percent. Moreover, the 11.9 percent value adopted by the Pennsylvania PUC was challenged in

⁸ See, e.g., Findings and Recommendations of Hearing Examiners, Delaware PSC Docket No. 96-324, ¶¶ 68 (De. PSC Apr. 7, 1997) (10.28 percent), *affirmed*, Order No. 4542, at ¶ 29 (De. PSC July 8, 1997), *affirmed*, *Bell Atlantic-Delaware, Inc. v. McMahon*, 80 F.Supp.2d 218, 239-41 (D.Del. 2000); Order, Case No. PUC970005, at 11 (Va. SCC May 22, 1998) at 6 (10.12 percent); Order, Case No. 8731, at 29 (Md. PSC Sept. 22, 1997) (10.1 percent).

federal district court by AT&T and MCI as excessive and contrary to TELRIC principles, and the court remanded this aspect of the PUC's decisions for reconsideration in light of the August 8, 1996 Order.⁹

C. Contemporaneous Estimates By Investment Banks And Other Finance Professionals

17. The 12.16 percent cost of capital adopted by the MDTE is also far above the cost of capital estimates used by major investment banks and brokerages to determine the fair market value of local telecommunications carriers in mergers and acquisitions since 1996, and cost of capital used by investment analysts in advising their investor clients during the same period. Salomon Brothers in its January 1996 report "Regional Bell Operating Companies—Opportunities Ring ... While Danger Calls" stated that,

"[b]ased on our estimates, the RBOCs currently have an average weighted cost of capital of approximately 8.6%. In order to value the RBOCs on a level playing field, we used the same discount rate in each DCF. Specifically, we used a discount rate of 10%, which we believe should be the minimum return an investor would expect in order to entice him to invest in a security, despite the fact this is slightly above the cost of capital."

18. Even more significantly, on September 18, 1996, in connection with the proposed merger of Bell Atlantic with NYNEX, the two companies submitted to their shareholders and the SEC a joint proxy statement/prospectus in which Bell Atlantic's investment advisor, Merrill Lynch, performed a DCF analysis of the two companies' relative market values, estimating a discount rate in the range of 8% to 10% for the telephone company portion of its portfolio of businesses (i.e., its local network and directory business). This estimate reflected a deliberate differentiation among the

⁹ See *MCI Telecommunications Corp. v. Bell Atlantic-Pennsylvania, Inc.*, Civil No. 1:CV-97-1857 (M.D. Pa., June 30, 2000), Memorandum and Order at pp. 10-13.

relative risks of Bell Atlantic's various activities and entailed a forward-looking analysis of expected cash flows, market risks and investor expectations that postdated both the Telecommunications Act of 1996 and the release of the Commission's *Local Competition Order*.

19. Likewise, in the Bell Atlantic-GTE merger prospectus filed with the SEC on April 14, 1999, Bell Atlantic's financial advisors, Merrill Lynch and Bear Stearns, used a range of discount rates from 8.5% to 10.5% to determine the exchange ratios of Bell Atlantic and GTE shares. Notably, Bell Atlantic's advisors performed an illustrative valuation of the expected combination benefits where they discounted expected incremental free cash flows using a discount rate of 9.5%.

20. In the same Bell Atlantic-GTE merger prospectus, GTE's financial advisor, Salomon Smith Barney, used a range of discount rates from 9% to 11% to perform a DCF analysis of Bell Atlantic's and GTE's value. It used the same rates to value the potential merger synergies.

21. Many recent analyst reports also indicate that analysts consider the cost of capital for various telecommunications businesses to be in the same range or even lower. For example, Morgan Stanley Dean Witter used a 10% estimate of the cost of capital in its DCF valuation of ALLTEL.¹⁰ In April 2000, BHF-Bank used an 8.2% cost of equity and 7.7% WACC for valuing Deutsche Telekom.¹¹ ABN Amro used a 10% discount rate to value Bell Atlantic's local, long-distance, directory assistance and wireless services.¹² In its September 29, 2000 DCF valuation of SBC

¹⁰ Morgan Stanley Dean Witter, "Alltel Corporation", March 10, 2000, p. 4, and March 13, 2000, p. 3.

¹¹ BHF-Bank, "Deutsche Telekom", April 27, 2000, p. 6.

¹² ABN Amro, "Bell Atlantic Corporation," January 20, 2000, pp. 9, 12, 19.

Communications, A.G. Edwards employed a 8.70% cost of capital for the holding company in aggregate.¹³

D. Estimates In Verizon's Securities Filings

22. Perhaps the most compelling rejoinder to the MDTE's 12.16 percent cost of capital determination has been furnished by Verizon itself. The 12.16 percent value is far above the cost of capital which the financial advisors of Verizon and its predecessor companies assumed in their merger proxies and other filings with shareholders and the Securities and Exchange Commission during the Bell Atlantic/NYNEX and Bell Atlantic/GTE mergers.

23. As noted above, Bell Atlantic submitted to its shareholders, as part of its proposed merger with NYNEX, a joint proxy statement/prospectus on September 18, 1996 in which Bell Atlantic's investment advisor, Merrill Lynch, performed a DCF analysis of the two companies' relative market values, estimating a discount rate in the range of 8% to 10% for the telephone company portion of its portfolio of businesses. On appeal from the UNE decision of the Delaware PSC in 1997, the United States District Court for Delaware held that this range of discount rates provided substantial support for the 10.28 percent weighted cost of capital determined by the Delaware PSC. *Bell Atlantic-Delaware, Inc. v. McMahon*, 80 F.Supp.2d 218, 241 (D. Del. 2000).

24. Likewise, the Bell Atlantic-GTE merger prospectus filed with the SEC on April 14, 1999, used a range of discount rates from 8.5% to 10.5% to determine the exchange ratios of Bell Atlantic and GTE shares. Notably, Bell Atlantic's advisors performed an illustrative valuation of the expected combination benefits where they discounted expected incremental free cash flows using a

¹³ A.G. Edwards, "SBC Communications," September 29, 2000, pp. 9-10.

discount rate of 9.5%. And GTE's financial advisor, Salomon Smith Barney, used a range of discount rates from 9% to 11% to perform a DCF analysis of Bell Atlantic's and GTE's value and to value the potential merger synergies.

III. THE RECORD BEFORE THE MASSACHUSETTS DTE PROVIDES NO BASIS FOR ADOPTING A HIGHER COST OF CAPITAL THAN ELSEWHERE IN THE VERIZON REGION.

25. The Massachusetts DTE defends its solitary support for a 12.16 percent cost of capital as a reasoned response to the local circumstances prevailing in Massachusetts, including the degree of competition facing NYNEX there. In its decisions, however, the DTE has failed to identify *any* local conditions unique to Massachusetts that warrant a higher cost of capital than elsewhere on the Eastern seaboard. Furthermore, based on our experience in the cases in which we appeared against Dr. Vander Weide, his cost of capital study in Massachusetts was essentially *identical* in its methodology, assumptions, results and supporting narrative to every other cost of capital study he submitted in a UNE proceeding involving NYNEX or Bell Atlantic in 1996-97.

26. Equally unfounded is the DTE's claim that Verizon's competitive risks in Massachusetts warrant a cost of capital of 12.16. The biggest single cause of error in Dr. Vander Weide's inflated cost of capital estimate was the nonsensical assumption in his DCF analysis that the companies in his S&P 400 comparison group would continue forever to grow at an above-average rate. Merely substituting a three-stage DCF model for his one-stage model, but leaving his risk assumptions and other inputs in his analysis completely unchanged, single-handedly reduces Dr. Vander Weide's cost of equity from 14.8 percent to 11.38, and his weighted average cost of capital from 13.18 percent to 10.5 percent—well under the 12.16 value ultimately accepted by the MDTE.

Moreover, the notion that the wholesale supplier of UNEs in Massachusetts would face substantial competitive risk for the foreseeable future is contrary to Verizon's own admissions elsewhere.

A. The Record Before And Findings Of The Massachusetts DTE

1. The 1996 cost of capital study submitted by AT&T witness Hubbard

27. As noted above, the cost of capital study submitted by AT&T to the DTE in 1996, sponsored by Prof. Glenn Hubbard, recommended a weighted average cost of capital of 9.8 percent for NYNEX, based on a forward-looking equity cost of 11.5 percent, a current debt cost of 7.7 percent, and a capital structure consisting of 45 percent debt and 55 percent equity. Dr. Hubbard's study followed well-accepted procedures for estimating the cost equity, the cost of debt, and the appropriate capital structure (i.e., debt/equity ratio).¹⁴

28. Because the forward looking cost of equity cannot be observed or measured directly,¹⁵ the finance profession has developed two widely used methods for doing so indirectly: the discounted cash flow ("DCF") model and the capital asset pricing model ("CAPM").

29. The DCF model requires the analyst to (1) select a comparison group of the publicly traded companies whose anticipated business risks are the closest possible to those of the business being analyzed; (2) estimate the amount of dividends per share that each comparison company is likely to pay in the future, taking into account the expected future growth in the company's earnings;

¹⁴ Direct Testimony of Robert Glenn Hubbard on behalf of AT&T Communications of New England, Inc., in D.P.U. 96-80/81, *In the Matter of the Interconnection Agreement Negotiations Between AT&T Communications of New England Inc. and New England Telephone and Telegraph Co. Pursuant to 47 U.S.C. § 252* (filed Oct. 11, 1996) ("Hubbard Direct").

¹⁵ Unlike the return on a bond or other debt investment, which is generally fixed by contract, the expected return on a share of common stock depends on the anticipated future growth in dividends. Because dividends to shareholders are paid at the discretion of management over an indeterminate period and equity has no face value, the cost of equity can only be estimated. *Id.* at 8.

and (3) calculate the discount rate that will reduce the future stream of expected dividends to the current price of the comparison company's stock. That discount rate is the cost of equity capital.

30. In his DCF analysis, Dr. Hubbard selected a comparison group of eleven large publicly traded telephone holding companies with local operations: Alltel, Ameritech, Bell Atlantic, BellSouth, Cincinnati Bell, GTE, NYNEX, PacTel, SBC, SNET and US WEST. To estimate the future dividend payout of each company, Dr. Hubbard performed a three-stage analysis. For the first five years, he assumed that the growth of each company's earnings (a proxy for the growth of its dividends) would equal the five-year earnings growth forecasts compiled by Institutional Brokers' Estimate System ("I/B/E/S"). For years 20 and beyond, he assumed that each company's earnings would grow at the anticipated nominal long run growth rate of the gross national product ("GNP"). For years six through 19, he assumed that the each company's earnings would decline linearly from the first-stage growth rate to the third-stage growth rate. The average annual discount rate needed to reduce the future dividend stream estimated by this method to a present value equal to the current price of the company's stock—i.e., the estimated cost of equity—was approximately 11 percent.¹⁶

31. The CAPM methodology defines the cost of equity for a company as the default-risk-free return plus the risk premium. The company-specific risk premium in turn equals the risk premium for the stock market as a whole, multiplied by the "beta" (relative risk coefficient) specific to the company. Performing a CAPM analysis, Dr. Hubbard estimated that the cost of equity for NYNEX was approximately 11.9 percent. Taking the midpoint of the 11 percent DCF estimate and the 11.9 percent CAPM estimate, Dr. Hubbard obtained an estimated cost of equity of 11.5 percent.¹⁷

¹⁶ *Id.* at 9-12 & Attachment 1.

¹⁷ *Id.* at 12-15.

32. To estimate the cost of debt, Dr. Hubbard determined the weighted average yield-to-maturity of all outstanding long-term bonds issued by NYNEX, as reported in Standard and Poor's *Bond Guide*. From these data, he determined that the weighted-average cost of debt for NYNEX as 7.7 percent.¹⁸

33. The final step in a calculating a weighted average cost of capital was to determine an appropriate capital structure, or debt/equity ratio. Most corporations are financed by a mix of equity (capital contributed by common stockholders) and debt (capital supplied by buyers of bonds and by other lenders). The choice between debt and equity involves a tradeoff. Debt financing is cheaper; equity financing is safer. A company suffering from unexpectedly poor earnings can reduce or eliminate its dividend payment without any contractual liability to its common shareholders. Payment of interest to lenders, however, is a contractual obligation; and defaulting on this obligation opens the company to seizure of its assets by the creditors. For this reason, the optimal mix of debt and equity financing depends on the risk of the business: the less risky the company, the more debt in its capital structure is optimal, and *vice versa*.¹⁹

34. The theoretically correct measure of the capital structure of a firm is the target ratio of the market value of outstanding debt to the market value of outstanding equity for a comparison group of other firms engaged in the same line of business (i.e., the wholesale supply of unbundled network elements). Currently, however, there are no separately traded firms operating exclusively as a wholesale provider of unbundled network elements (indeed, there are few if any publicly traded firms that provide only local telephone service). The most comparable companies are the large

¹⁸ *Id.* at 7-8.

¹⁹ *Id.* at 15-16.

regional telephone holding companies (“RHC”s), which have been required to provide unbundled network elements at wholesale. Because RHC’s currently engage in more risky businesses of selling retail phone service, cellular service, paging, information services, long-distance, cable and the like, using these companies as comparables leads to cost of capital estimates that are necessarily too high. For this reason, it is impossible to observe directly the efficient capital structure of a business devoted solely to the wholesale supply of unbundled network elements. As a reasonable surrogate, Dr. Hubbard averaged the debt/equity ratios of the telephone holding companies in his sample using (1) the book value of debt and equity, and (2) the book value of debt and the current market value of equity. The book ratio derived by Dr. Hubbard was 57% debt/43% equity; the market ratio was 25%/75%. Dr. Hubbard selected a ratio of 45% debt/55% equity—a ratio close to the midpoint of the range and the ratio then used in the Hatfield Model.²⁰

2. The 1996 cost of capital study submitted by Verizon witness Vander Weide

35. The other cost of capital study before the MDTE, sponsored by NYNEX witness James Vander Weide, estimated a weighted average of cost of capital of 13.18 percent—3.38 percentage points higher than the estimated provided by AT&T witness Hubbard. Dr. Vander Weide based his 13.18 percent value on an equity cost of 14.8 percent, a debt cost of 7.87 percent, and a capital structure composed of 23.51 percent debt and 76.49 percent equity.²¹

36. Dr. Vander Weide’s analysis, while purportedly based on the same DCF model used by Dr. Hubbard, departed from it in three major respects. First, instead of a DCF comparison group

²⁰ *Id.* at 15-16, 19-20 & Attachment 3.

²¹ Substitute Direct Testimony of James H. Vander Weide in DPU 96/73-74 *et al.*, *NYNEX/Teleport Arbitration et al.* (filed Oct. 28, 1996) (“Vander Weide Direct”).

composed of telephone holding companies, he used a comparison group consisting of 400 of the companies in the S&P 500, "a composite of all large competitive companies in the U.S. economy."²² Second, instead of a three-stage DCF model, he used a one-stage model, which assumes that the above-average growth rates projected by investment analysts for the S&P Industrials for the 1996-2001 period would continue forever, and would never regress to the mean growth rate of the overall economy. Third, Dr. Vander Weide also adopted the current market debt/equity ratio of the S&P Industrials, rather than the more leveraged capital structure appropriate for the wholesale business of supplying UNEs, a lower-risk line of business.²³

3. The Massachusetts DTE's decision of December 1996

37. The Massachusetts DTE, in its final decision of December 4, 1996, accepted every significant assumption made by Dr. Vander Weide except for his one-stage growth assumption.²⁴ With respect to the risk of supplying UNEs, the DTE asserted that the possibility that facilities-based entry might bypass the local NYNEX network rendered unbundled network elements a "'hybrid' set of assets, having some of the characteristics of monopoly bottleneck facilities while also displaying some characteristics of speculative, unsecured investments."²⁵ Accordingly, the DTE accepted Dr.

²² *Id.* at 21.

²³ In his rebuttal testimony, Dr. Vander Weide submitted a CAPM analysis that achieved similar results. As with his DCF analysis, Dr. Vander Weide assumed that the wholesale supplier of UNEs would have same level of business risk as an unregulated industrial company. See Rebuttal testimony of James H. Vander Weide in Docket Nos. 96/73-75 *et al.* (filed Oct. 30, 1996) ("Vander Weide Reb.").

²⁴ D.P.U. 96-73/74, 96-75, 96-80/81, 96-83, 96-94 – Phase 4, *Consolidated Petitions of New England Telephone and Telegraph Company d/b/a NYNEX, Teleport Communications Group, Inc., Brooks Fiber Communications, AT&T Communications of New England, Inc., MCI Communications Company, and Sprint Communications Company, L.P., pursuant to Section 252(b) of the Telecommunications Act of 1996, for arbitration of interconnection agreements between NYNEX and the aforementioned companies* (released Dec. 4, 1996) ("Phase 4 Decision").

²⁵ *Id.* at 43-46.